NONPOINT SOURCE TIMES

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National NPS Focus Group Results

(To help us be smarter at outreach)

(The following is an excerpt from a national EPA workgroup report. If anyone would like a complete copy please contact Kathy Hoppe at (207) 764-0477 or kathy.m. hoppe@state.me.us)

EPA NONPOINT SOURCE POLLUTION FOCUS GROUPS FINAL REPORT

Abstract

The Environmental Protection Agency (EPA) Nonpoint Source Management Partnership (NSMP) issued a contract to LISBOA, Inc. to conduct eight focus groups to better understand the attitudes, beliefs, feelings, and motivations of the general public toward nonpoint source pollution. Information obtained from respondents during these groups would be used to determine key messages, multimedia materials, credible intermediaries and messengers, a media outreach plan, and ways to overcome both real and perceived barriers to communication. The eight groups were scheduled in Salt Lake City, Philadelphia, Seattle and Atlanta. Two groups, segmented by age, were conducted at each site. One included 20-35 year olds, and the other 36-60 year olds.

Almost no participants were familiar with the term "nonpoint source pollution," and none could recall a public awareness campaign addressing the problem. Most said that the

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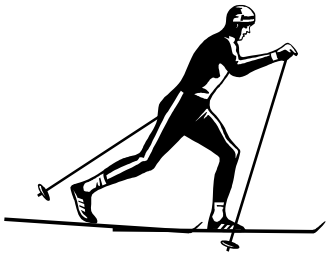

Evaluating the Effectiveness of Watershed Surveys

For years the Maine DEP has promoted and encouraged volunteers and lakeshore residents to conduct watershed surveys as a way to protect lake water quality. The goal has been two-fold. First, to empower and educate those living in the watershed about what and where the pollutants are coming from in their lake's watershed and methods to prevent the pollutants from reaching the lake (BMPs). And second, to document the problems so the pollutants can be eliminated or reduced. But is that what we have really been doing? Are we hitting our first objective? Did we really educate the people who attended the training? Did they take to

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From the U. S. Forest Service: "Water Erosion Prediction Project (WEPP)", is a means of calculating soil loss avoidance for unpaved roads.

Check out the web interface (http://forest.moscowfsl.wsu.edu/fswepp/)

The WEPP:Road interface seems most useful. Its parameters include local climate data, soil texture, basic road design, gravelled/ungravelled road surface, topography and road width.

Innovative Funding Source for Watershed Model

Perhaps one of the most important issues concerning conservation today, and certainly one of the most oft encountered topics among Maine's sixteen Conservation Districts, is the issue of non-point source pollution. A recently developed hands-on educational tool, the *EnviroScape NPS Watershed Model*, effectively demonstrates the NPS concept to students of all ages, helping them to visualize not only what impacts NPS pollution can have, but how we as individuals can lessen or negate these impacts altogether.

Over the last year or so, our District has been fortunate enough to utilize the Maine Department of Environmental Protection's *EnviroScape* for classroom visits, watershed survey trainings, and more. Because of the model's huge and ever-growing popularity with students and teachers alike, however, the demand for demonstrations became so great throughout the entire County, that it was difficult to share the model between our two organizations, while reaching all audiences at the same time.

Our District soon began looking into the possibility of obtaining our own model so that we could better serve schools and community groups within the St. John Valley, and so began looking to outside organizations wishing to sponsor the purchase of this model as well. Our success came in approaching the local Walmart Store in Presque Isle, who upon receiving our introductory letter, responded with great enthusiasm toward the "greening" of our local communities. They agreed to sponsor the entire cost of the model, plus storage and shipping charges, with one catch... we needed to be a 501(c) 3 organization under the IRS code.

Since Districts are already deemed non-profit under a separate IRS code, this grant requirement necessitated our partnering with a true 501(c) 3 organization, thus we sought out the assistance of our local USDA Resource, Conservation, and Development (RC&D) office, in hopes of gaining their support and assistance with the grant application. Their support was equally enthusiastic, and a true collaborative effort between all three entities ensued, all in the name of hands-on environmental education.

If you are interested in learning more about Enviroscape, check out their website at www.enviroscapes.com, or visit your regional MDEP office for a demonstration. Better yet, if you think Enviroscape is missing from your educational supply closet, why not join forces with other organizations such as the Walmart Foundation, interested in supporting environmental ideals, in order to obtain an Enviroscape of your own. The application is easy and the enduring rewards, immense!

Submitted by Heidi Royal of the St. John Valley SWCD. Heidi can be contacted at (207) 834-3311.

BACTERIA MONITORING IN TWO SOUTHERN MAINE WATERSHEDS

A new study of bacteria contamination in the Webhannet and Little River watersheds in southern Maine could lead to the reopening of long-closed clam flats and safer recreation. The two-year project, Microbial Source Tracking in Two Southern Maine Watersheds, has been funded by a $193,970 grant to the University of Maine from the Cooperative Institute for Coastal and Estuarine Environmental Technology at the University of New Hampshire. The project will involve scientists and citizen volunteers from University of Maine Sea Grant, University of Southern Maine, Wells National Estuarine Research Reserve, the Jackson Estuarine Lab at University of New Hampshire and the Maine Conservation Corps. Contact Kristin Whiting-Grant 207-646-1555, ext. 115, kristen.whiting-grant@maine.edu

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heart our messages and start incorporating BMPs into their property maintenance plans? We do know that we usually accomplish our second goal; these efforts frequently produce a report – the documentation of the problems, and sometimes this leads to 319 grants. But have we empowered the local residents?

To answer these questions about empowerment or our first goal, we devised a series of questions based on the goals of the survey training. Then two Americorps Volunteers Leaders used these 12 questions to conduct a phone survey of the watershed survey groups. The phone surveys were conducted 6-7 months after the training.

A total of 5 different watershed survey trainings were evaluated. All 5 trainings used the "*A Citizen's Guide to Lake Watershed Survey's*" as the basis for their training and survey methods, and all used a Microsoft Powerpoint presentation developed by David Ladd of the DEP. However, each presenter made slight modifications to the materials to reflect their own style and the particular lake. Of the 5 surveys, 2 had a DEP/Americorps lead facilitator; the other 3 were spear headed by a SWCD or the University of Maine Cooperative Extension. An attempt was made to reach all 54 volunteers but only 31 were actually surveyed.

The results were overwhelmingly positive and consistent throughout all 5 watersheds. The majority of contacted could accurately describe what a watershed was and name a pollutant and the source of the pollutant. Most had taken some steps since the training to stop NPS pollution and many had talked to neighbors or town officials. It was almost unanimous that the watershed survey was worth their time (one volunteer had been fined in the past by DEP and had a bit of a negative attitude).

When asked "What might prevent you or your neighbor from taking actions to stop water pollution from entering your lake?" the most common sited obstacle was lack of money. The second most common theme was legal or regulatory issues. This points to the need to better explain what shoreland zoning and NRPA regulations.

It was almost unanimous– watershed survey was worth their time

Many liked the setup of the training, especially the field training with the 'expert'. A few requested that there be more training before they were sent out on their own to do the surveys.

When asked, "If there were only one thing that you, your neighbors or the town could do to protect your lake's water quality, what would you recommend?" the most common answers involved someone else doing something rather than individual homeowners. Examples included maintaining roads, educating school kids & town officials, restricting development, working with town officials, banning jet skis, stopping the spreading of manure, and testing everyone's septic system. There were far fewer who identified personal actions as the 'one thing' that could be done to protect the lake. A few did mention personal actions such as planting a buffer and giving everyone a copy of the report and having them fix their problems. This is possibly the result of the way the question was worded, but I doubt it as I frequently encounter 'someone else is responsible' attitude at lake association meetings. To be fair, technically, those who mentioned roads were most accurate in that the largest pollutant load most likely comes from the roads. In the future the question should separate out what they or their neighbor can do from what the town can do in order to see if the volunteers understand/accept the personal responsibility perspective.

The final question asked if they had any final comments regarding the survey or training.

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ROLE OF ALUMINUM IN WATER QUALITY

Scientists do not fully understand why some lakes turn green with algae while lakes with similar chemical and geographical characteristics do not. With a $99,894 grant from the U. S. Geological Survey through the UMaine Senator George J. Mitchell Center for Environmental and Watershed Research, researchers will work with the Maine Department of Environmental Protection (DEP) to study the possibility that aluminum plays a significant role in lake chemistry.

They will study the relationship between aluminum containing compounds and chemical processes that release phosphorus into the water. The study will focus on several Maine lakes that exhibit little or moderate algae growth despite conditions that typically favor rapid growth.

Participating scientists include Steve Norton of the Dept. of Geological Sciences, Aria Amirbahman of Civil and Environmental Engineering, Steve Kahl of the Mitchell Center and Roy Bouchard of the Department of Environmental Protection. The DEP has contributed $20,000 for student support

Two Maine Groups Receive Environmental Education Grants

BOSTON - The U.S. Environmental Protection Agency announced today that two projects in Maine have received a total of $26,700 in environmental education grants from the U.S. Environmental Protection Agency. The funds were awarded to the Morris Farm Trust in Wiscasset ($14,7000) and the Quebec-Labrador Foundation, based in Ipswich, Mass. ($12,000).

"These grants will help projects in Maine educate residents about their own environment and how they can help to protect it," said Robert Varney, regional administrator at EPA's New England office. "Teaching residents about the air, land and water around them is an effective, cost-efficient way to protect the environment."

The Morris Farm Trust funds will use its funds for a partnership in which teachers and students will use the Morris Farm's facilities to explore concepts like sustainable agriculture forest ecology, energy efficiency and natural resource management. Students will be able to search for real solutions to real challenges facing farm operations.

The Quebec-Labrador Foundation will use its funds for the Bays Stewardship Network in which 100 teachers and students in Washington County, Maine and New Brunswick, Canada will participate in training workshops and research projects on environmental issues pertaining to Cobscook and Passamoquoddy bays.

EPA announced a total of $185,000 in environmental education grants to 24 New England organizations this year. These grants benefit the environment while educating students, teachers, and the public. EPA New England is currently accepting proposals for smaller grant requests. For more information on grants, visit EPA's website at www.epa.gov/region01 and click on education or call Sarah White at the EPA at 1-888-372-7341. The application deadline was Nov. 15.

Stormwater Phase II

Wonder what is happening? Who is in charge?

Contact David Ladd, Maine DEP's new Stormwater Phase II Coordinator at 287-5404 or david.ladd@state.me.us

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The common theme to many of the answers was that they wanted to be kept informed. This response is not unexpected when one realizes that the volunteers are trained in the spring and complete their part of the survey by the end of June. Then they hear nothing about the survey until the report is completed, 4 to 6 months later. Possible solutions include: (a) sending letters of thanks after the volunteers submit their data and providing a time line for when the report should be completed; (b) sending out a newsletter to the volunteers updating them on the progress; (c) presenting at the annual lake meeting, if there is one, and updating everyone; and (d) holding steering committee meetings with updates.

Conclusions:

1. The watershed survey training is succeeding at accomplishing our goal to empower and educate the volunteers on important issues.
2. The volunteers feel the survey is worth their time.
3. If there are specific personal actions (BMPs) that the trainers or DEP wishes to encourage; then the trainer will need to push them more directly during the training session. (For example, if planting a buffer, reducing the size of the lawn or controlling erosion off their driveway are the most important personal actions someone can take, they need to be pushed throughout the training.)
4. There needs to be a conscious effort to keep the volunteers informed/connected in the interim period between the completion of their work and the final report. And to supply some closure and satisfaction, each volunteer should be provided a copy of the final report.

One other interesting note about the phone surveys involved who did the calling. The phone surveys were conducted by two SERVE Maine Americorps Volunteer Leaders. One of the Americorps members had been the facilitator for the lake surveys and the individuals that were contacted; the other Americorps was new to the process and did not know the people at all. It did not appear to matter who was asking the questions; both Americorps members received a warm response from the volunteers. However, it would be helpful to the person conducting the phone survey if they are not familiar with the project, to have some sort of concluding script to provide the volunteers an update on the progress of the survey report.

For more information contact Kathy Hoppe at 764-0477 kathy.m.hoppe@state.me.us or Karen Hahnel at 287-7732 or karen.a.hahnel@state.me.us

Maine's Soil Erosion Pilot Media Campaign A Success

(Editors note: The following is excerpts from the final report prepared by Maine DEP's contractor Market Decisions. For a full copy of the report, contact Kathy Hoppe, Maine DEP, 1235 Central Drive, Presque Isle ME 04769, 207-764-0477 or kathy.m.hoppe@state.me.us)

For a number of years the Maine Department of Environmental Protection has provided outreach to educate the general public about the effect of soil erosion on water quality and it has assisted with the implementation of steps to reduce soil erosion. Soil Erosion is, in fact, the single largest contributor to water pollution. Unfortunately, past surveys have shown that most of the public has little or no knowledge that soil erosion is an important pollutant.

In order to assess the opportunity to increase the level of the educational effort and change these perceptions, the Maine Department of Environmental Protection engaged Market Decisions and Burgess Advertising to conduct a "test market". Research would be conducted to assist in the development of a campaign; communications materials would be developed and then implemented in a limited area. The results of this campaign would be evaluated and then used to estimate funding levels necessary for a statewide campaign.

"The communications program achieved a high level of advertising awareness, 31% recalled the advertising on an unaided or aided basis."

A key constraint for the test was the budget, development of all materials, purchase of the media and pretest and posttest market research needed to be completed at a cost of $60,000.

All steps in the research were conducted with the active participation and input from the Maine Department of Environmental Protection staff. This includes development of the focus group discussion guide, review of the focus groups, selection of the test markets, development of the logo and tag line, development of the radio ads, development of the newspaper ads, and the development of direct mail pieces.

Test Market Selection

To conduct a test with the limited funding available, it was necessary to select a market that was representative of the state and could be economically reached. This meant that we could not afford a major market like the Portland area and a smaller market had to be reached with local media without "wasting" media dollars on areas that are not part of the test. The Augusta, Maine area seemed to best meet our requirements. It has a major newspaper serving the region and several stations that primarily service listeners in the area. Further, the Augusta area includes a mix of demographic groups and a mix of geographic areas from urban to rural that would allow us to understand the effects of advertising on different population groups and different areas.

Initial Market Research

Market Decisions had, in the past, conducted research on awareness of soil erosion for the DEP and it had found awareness to be very low or nil. For the purpose of the market test,

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Stormwater Phase II– Update

On November 15th, DEP sponsored an informational meeting in Lewiston on the Stormwater Phase II Program. The workshop was attended by 190 people from municipalities, consulting firms and other organizations. Information was presented on the Federal requirements of the Phase II Program. DEP announced plans for formation of an advisory group to assist in developing a General Permit for regulated entities.

The first meeting for the advisory group is to be held in Augusta on December 19th, 2001.

For more information on Stormwater Phase II, please contact David Ladd, Program Coordinator, at the Maine DEP. (207) 287-5404 or david.ladd@state.me.us

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we would assume that the awareness of soil erosion as a pollutant matched the results from previous statewide surveys. Increases in awareness above this would be assumed to be a result of the campaign.

Consequently, we elected to spend the available funds on two focus groups rather than spending limited funds on a market pretest specifically for the Augusta area. These focus groups would provide insights into citizen perceptions, attitudes and behaviors with respect to soil erosion and water pollution and would be used to test initial ideas on communications materials.

Initial Market Research (Focus Group) Findings
Two focus groups were conducted, one in Portland on January 30, 2001, to test citizens from an urban/suburban area and one in Augusta on January 31, 2001 representing more rural/ suburban participants. Key findings were as follows:

1) Participants in the groups cared a great deal about the environment. They are, at least on the surface, very knowledgeable about environmental issues and sources of water pollution. They could readily talk about many different issues and types of water pollution – from ones that are very obscure to ones that are prominent national stories. The diversity of issues discussed was remarkable.

This suggests that communication on the importance of soil erosion, as a source of water pollution, would reach a receptive audience.

2) Participants get most of their information about pollution from the media – and they recognize the emphasis of the media on sensationalizing issues.

Information on water pollution from a credible source is likely to be well received.

3) Participants appear to be concerned about many environmental issues – and are not necessarily capable of sorting which issue is in fact the most important.

Credible information on what is most important to focus on in order to reduce water pollution will be well received.

4) Soil erosion is not "top of mind" as a source of water pollution. Most do not know it's a problem.

Consumers are unlikely to make stopping soil erosion a priority if they don't know it is a problem.

5) Participants can understand how soil erosion could be a major source of water pollution – but will need information from a credible source to fully believe it.

Assertions that soil erosion is an important source or is the number one source of water pollution will need to be backed up by evidence delivered from credible sources.

6) Either of two logos presented generates attention and gets important messages across. Participants liked the logo showing a river and fish because it created an emotional response for protection. Participants liked the logo with a tree because it dramatically showed eroding soil.

By modifying the logo with the fish and the river to also graphically show eroding soil, this presentation may offer the best of both.

7) The tag line, "It's a dirty secret, soil erosion is the #1 source of water pollution", effectively generates attention and interest on the issue.

It may be preferable to use more than one tag line – an attention getting one followed by one that emphasizes individual action.

8) Participants suggested that the actions they could take to reduce soil erosion were impractical and others were unclear.

It is likely that this campaign will be very effective in generating awareness. Citizens are concerned about the environment, receptive to information about causes of pollution and the creative materials are on target and will attract attention and generate interest. The decision to take action may flow naturally out of this campaign – without much effort. Thus, the campaign will beg the question: What should I do?

Post Advertising Test

To determine the effects of the advertising, a telephone survey was planned for immediately after the end of the campaign. A survey instrument, approximately 20 questions in length, was developed to cover issues such as aided and unaided awareness of sources of pollution and aided and unaided awareness of advertising. In addition, we repeated questions asked in previous surveys on sources of water pollution. These questions tested unaided awareness of the most important causes of water pollution to allow a before and after comparison. A total of approximately 300 interviews were planned with 75 of those interviews to be completed in the Litchfield/ Monmouth area in order to understand the additional effects of the direct mail effort.

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Communications Materials

The campaign was designed as a coordinated set of materials and advertisements. A logo and a tag line were developed to be used in all communications. The advertising was to be placed in three different media: newspaper, radio and direct mail to maximize the reach with residents and allow various forms of communication to reinforce each other.

Summary of Results

1. The communications program achieved a high level of advertising awareness, 31% recalled the advertising on an unaided or aided basis.

2. The newspaper and radio advertising appeared to be the most effective. The direct mail did not appear to be at all effective.

3. The communications appeared to have had an important effect upon some of the target population. For the first time 12% of respondents mentioned soil erosion when asked about important sources of water pollution. Of those who recalled seeing the advertising, almost 70% could describe a specific action that could be taken to reduce soil erosion.

4. Many who recalled the advertisements seemed to only vaguely recall specifics of the advertising. For example, many respondents said that they saw the ads on TV when no ads were run in this medium. Many could not recall what the advertising was about. We suggest that this lack of in-depth knowledge may be due to issue not being directly relevant to many in the target market. Individuals may be concerned about water pollution, concerned about soil erosion, but may not see what they can do about it.

Please note that the products of this effort are available through Maine DEP if any organization would like to use them. Please contact Kathy Hoppe at 764-0477 or kathy.m.hoppe@state.me.us for more information.

Maine DEP is seeking proposals for Maine Wetland Program Development Grants. These grants are administered by DEP in cooperation with EPA through funding provided under Section 104(b)(3) of the Federal Clean Water Act. The RFP, including application instructions, may be obtained on the DEP web site at:

http://www.state.me.us/dep/blwq/rfp.htm

Youth–Becoming Erosion Experts

(Editors note: This article first appeared in the Press Herald and was written by staff writer Giselle Goodman.)

These teens are in the trenches - Youth conservationists give vulnerable Mousam Lake a fighting chance against pollution.

Acton - Melinda Cairn's property may not be the loveliest on Mousam Lake, but it's now a prototype for how property owners can protect the lake from erosion.

On Monday, five local teen-agers dug trenches in her driveway and planted ferns on her bank as part of an effort to reduce pollution caused by erosion or water runoff in the heavily used lake.

From now until Aug. 22, the Mousam Lake Youth Conservation Corps is visiting private homes along the lake to dig culverts and trenches and plant vegetation to keep polluted water from running off into the lake.

Their work is especially important for Mousam Lake. Nestled between Acton and Shapleigh, the lake is a desirable summer playground. It's also one of the lakes in Maine that is most at risk from development, said Don Kale, a watershed manager for the state Department of Environmental Protection.

Because of the number of houses on the lake, there is an abundance of exposed or grassy shoreline. When it rains, water runs down the banks picking up soil or fertilizer which then flow into the lake. This increases the mineral content in the water, causing algae to bloom and absorb oxygen, killing the fish.

The more barriers there are between a house and the lake, the less polluted the water. "To the private homeowner it means getting educated about how lake water quality is affected by land use," Kale said.

It's the job of the teenagers to help educate the land owners. They build culverts in driveways to divert runoff into the woods. They also dig trenches to catch rainwater. Buffer zones of shrubbery are planted to stop water, soil and minerals from running into the lake.

"It shows how landowners, through fairly simple measures, can really improve their property from a conservation perspective." Said Abraham Rushing, coordinator of the project, sponsored by the York County Soil and Water Conservation

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Lake Protection Efforts in Belgrade Chain of Lakes

Lake protection and restoration efforts in the Belgrade Chain of Lakes provides a model for other regions of the State. Key to the success of these efforts include strong local organizations, coordinated multi-organizational effort, a regional approach, and a sustained presence in the community.

Background on the Lakes:
The Belgrade Chain of Lakes includes seven lakes located in the towns of Mercer, Rome, Smithfield, Oakland, Mount Vernon, Belgrade and Sidney. East and North Ponds flow to Great Pond, as well as McGrath Pond and Salmon Lake. Great Pond flows to Long Pond and then on to Messalonskee Lake, which drains directly to the Kennebec River. The watershed covers a total of 126.5 square miles and total lake acreage is 28.5 square miles (18220 acres).

Water quality across the seven lakes ranges from above average to below average/poor. Great Pond and Long Lake have water quality that is considered above average. However, low dissolved oxygen levels in Great Pond and the north basin of Long Lake are of concern; and of particular concern for Great Pond is declining water quality. Messalonskee Lake water quality is average for Maine Lakes. McGrath Pond and Salmon Lake are connected by a thoroughfare (McGrath to Salmon), but the two lakes have different water quality. McGrath Pond's water quality is slightly above average and Salmon's is slightly below average. Salmon Lake has experienced historic algal blooms and it's water quality is considered sensitive. East Pond has below average to poor water quality and experiences periodic algal blooms. East Pond flows to North Pond and water quality of North Pond is below average with potential for algal blooms considered moderate. All of the lakes in the Belgrade chain are listed on the Nonpoint Source Priority Watersheds list due to existing water quality or concern for sensitive or potential decline in water quality.

"This was a critical step, since BRCA now has a full-time professional staff person responsible for carrying out protection/ restoration efforts."

Local Organizational Structure:
Each of the lakes in the Belgrade Chain has a lake association or a joint lake association that has been active for a number of years. In addition, these associations are brought together through the Belgrade Regional Conservation Alliance (BRCA); which in addition to being a land trust serves as an umbrella organization for the lake associations. The umbrella organization serves a number of purposes. Expertise and resources among lake associations may be shared. The alliance provides a single-unifying voice for lake protection efforts. Lastly, the alliance serves as a conduit for efforts and projects that serve the lakes regionally. An example of this is establishment and on-going support of a Youth Conservation Corp (established in 1996) for the Belgrade Region. The BRCA also serves as the vehicle for obtaining and carrying out grants.

Building Lake Protection and Restoration Activities:
Because the Belgrade area lakes were targeted by the Department of Environmental Protection (DEP) as an area of concern, DEP assisted in efforts to get further lake protection efforts underway. A watershed survey was carried out by DEP with volunteer assistance from the McGrath/Salmon Lake Association in the Spring through Fall of 1998.

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StormCon 2002, the North American Surface Water Quality Conference & Exposition

Forester Communications, publisher of Stormwater magazine, invites everyone to participate in StormCon 2002, the North American Surface Water Quality Conference & Exposition. StormCon is the first event of its kind: a highly focused, nationwide forum dedicated exclusively to the needs and concerns of surface water quality professionals.

If you are involved in managing or funding a stormwater program or stormwater utility, researching or designing best management practices, developing regulations or helping your community comply with them, consider sharing your experience and expertise at StormCon. We are seeking presentations in the following conference tracks:

Effectiveness of BMPs
Monitoring, Evaluation & Modeling
Public Education & Outreach
Financing the Stormwater Program

SormCon will take place at the Marco Island Marriott on Marco Island, Florida, August 12-15, 2002. You can find the Call for Papers online athttp://stormcon.com. For further information please visit us on line at http://www.stormcon.com.

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District. "The hope is as this Conservation Corps continues on, it will become a real community-oriented thing."

Rushing said there are nearly 25 homeowners who have requested their services this summer. The home owner pays for the materials needed for the work, but the teenagers, led by Duane Snyder, provide the labor for free. A federal grant pays for the program.

"This is a nice balance," Snyder said. "A lot of landowners can have projects done that they may not be physically capable doing and it's a little more affordable."

Cairn, for one, was happy for the help. During the ice storm of 1998, a pine tree fell along her bank and stripped it of its vegetation. She also has a steep driveway that washes out during heavy rains sending grit and gravel into the lake.

On Monday, the teenagers were busy replanting her bare bank and digging trenches across the driveway to force runoff into the woods, instead of the lake.

The teenagers say the experience is rewarding. Besides being outside all summer, they are becoming erosion experts. They have learned that plants, such as ferns along a bank, slow down water run-off. They understand how fertilized lawns, full of phosphorus, dump nutrients into the water. They know why a graveled driveway with a culvert or two prevents erosion better than a paved driveway.

“Everywhere I go I look for erosion," said Ethan Garceau, 16, of Shapleigh. "It's just subconscious now."

Kristen Ponsonby, 16, from Acton, said she is now critical of those who live on the lake with perfectly manicured lawns because grass doesn't stop erosion.

"It gives you a new perspective of what water can do to the place and what impact it has on the pollution factor," she said.

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Building on this, the Belgrade Regional Conservation Alliance applied for and received a Nonpoint Source grant the following year (1999-2001). The purpose of the grant was first to continue the watershed survey process for East, North, and Great Ponds. At the same time, a watershed management plan for the Great Pond watershed (McGrath/Salmon Lake, North, East, and Great Ponds) was developed. In order to carry out the grant, the BRCA hired a full time watershed project director. This person, Mike Little was brought on board in July, 1999. This was a critical step, since BRCA now has a full-time professional staff person responsible for carrying out protection/restoration efforts. An additional benefit is that BRCA now has an office in Belgrade Lakes village allowing for a visible presence and accessible resource in the watershed.

The watershed management process and plan provided the next important step in lake protection efforts. Through the process of putting together the plan meetings were held with select boards and the public in order to gain support, educate and inform, and to gather input on problems and ideas. The management plan itself provides a long term plan for strategies that should be taken to protect and remediate the lake resources. The conception for the document is that it is designed to be a changing document so that it may be easily updated and as the plan for the lakes in the lower part of the chain is developed, this may be incorporated.

The BRCA was committed at this time to carry out the surveys and watershed management plan grant, but there was also concern among the various organizations that they did not want to lose momentum in the McGrath/ Salmon Lake watershed. Since the watershed project director was committed to completing the continuing surveys and management plan, the Kennebec County SWCD applied for and received a Nonpoint Source grant (August 2000 to January 2002) to implement BMPs on identified non-point source sites. The goal of this project is to implement BMPs on 30 medium and high priority sites. Another 2-4 high priority sites in the East Pond watershed were also included because of the water quality condition of East Pond and to build on other work by DEP (Lakes Unit) to develop a TMDL for the lake. The project concentrated on fixing road problems and holding workshops for landowners. The result was that five camp roads and associated problems were addressed, along with a coordinated effort to fix state and town road problems. The Kennebec SWCD plans to pursue another grant to continue fixing problems in the McGrath Pond/ Salmon Lake watershed.

In the Spring of 2001, the BRCA received two additional Nonpoint Source grants. One grant is to continue the

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watershed survey process in the Long Pond and Messalonskee watersheds, as well as continue the watershed management process and plan for these two remaining lakes. The other grant will implement BMPs in the East Pond and North Pond watersheds. Both of these projects are underway.

Lake activities have thus been carried out through a coordinated effort by several agencies to include the Department of Environmental Protection, the Kennebec Soil and Water Conservation District, the Belgrade Regional Conservation Alliance as well as the lake associations. Through implementation of all of these activities, the lake associations play a key role volunteering, supporting and coordinating efforts.

Conclusion:

The framework for lake protection in the Belgrade chain is a regionalized approach allowing for a coordinated and sustainable structure for long term protection. Effective programs require a longer term and collaborative approach-the efforts in the Belgrade Chain provide a viable model for other regions.

FMI contact Mary-Ellen Dennis at (207) 287-7729 or mary-ellen.dennis@state.me.us.

Tools for Watershed Protection: A Workshop for Local Government

Sponsored by EPA's Office of Wetlands, Oceans, and Watersheds. The workshop is free and will take place at the Boston Aquarium January 24 and 25,2002

WORKSHOP DESCRIPTION

The Environmental Protection Agency is conducting workshops in watershed localities around the country to encourage comprehensive planning. The goal is to involve public and private interests to achieve a balance between quality development and resource protection.

These workshops are directed to officials of local government and high-level staff of planning, public works, and environmental affairs departments who will explore numerous comprehensive planning tools.

These tools include performance standards in regulations, carrying capacity analysis, acquisition programs, private landowner initiatives, and other approaches that can be used by local governments to achieve a balance of economic prosperity and water resource protection. In many cases, water quality regulations, land use management plans, and resource protection programs are not administered in an integrated and mutually supportive fashion on either local or state levels. The EPA workshops will assist decision-makers and managers in recognizing the linkages between these three components of watershed management and stimulate solutions appropriate for watershed resource areas.

EPA's goal is to strengthen local participation through information transfer to local governments. Specifically, these workshops will assist local governments in protecting surface and ground waterresources by providing information on innovative zoning ordinances, land acquisition techniques, and other regulatory and nonregulatory management approaches.

WORKSHOP FEES AND REGISTRATION

Because EPA sponsors these workshops, there is no fee for the instructional portion of the course. However, registrants are solely responsible for their own travel expenses, including transportation, lodging, and all meals.

If you would like to attend this workshop, complete the registration form and return it as soon as possible. Please register early as attendance will be limited and accepted on a first come, first served basis. Enrollment priority will be given to local and state officials. Mail your registration form to Ellen Barros, Workshop Coordinator, c/o Horsley & Witten, Inc., 90 Route 6A, Sextant Hill, Sandwich, MA 02563, or FAX it to (508) 833-3150, attention Ellen. Confirmation letters and travel/lodging information will be sent. For general information regarding these workshops, please call Ellen Barros at (508) 833-6600.

If you desire overnight lodging, a block of rooms has been reserved for the nights of January 23rd and 24th at the Long Wharf Marriott at a special rate of $159 plus tax. When calling for a reservation, please refer to the EPA Watershed Conference. After January 4, 2002, this rate will be on a space-available basis only.

Capacity Building Resources

The following web site, put together by the Nonpoint Source Capacity Building and Funding Work Group, provides watershed groups and local governments links to technical tools for scientific support, engineering support, information technology, assistance with legal issues, project management, outreach, and planning support. It also provides links to legal resources for activities such as permitting, enforcement, contracting, fund raising and resource management. http://www.epa.gov/owow/nps/capacity/index.htm

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term seems non-descriptive and even confusing, and does not imply this is a pollution problem caused primarily by public behaviors. Many of the attendees were surprised to learn that they had already adopted a large number of non-point pollution prevention behaviors, however they were largely unaware that these behaviors collectively were reducing pollution caused by stormwater runoff. Most agreed that EPA should consider using a different term to describe this type of pollution, and preferably one that clearly emphasized "personal responsibility" for the problem.

The participants said that EPA should publicize the problem using primarily television and radio venues, although print media such as billboards and bus/subway transit ads. They recommended specific programming such as morning drive time and talk radio, television new magazines (e.g., 20-20, Dateline), evening video news releases, and the evening weather report. They indicated that most print is passé, and noted that they would likely not use the Internet to obtain information about the problem.

At some of the study sites, the younger respondents opined that when they were in school, the educational system did not seem to emphasize conservation and pollution prevention. They remarked that multimedia aimed at educating them must include production elements that uniquely target their age group. They cautioned that they pay little attention to generic messages that appeal to children and older adults. They suggested that ads for them should be bold, hard-hitting, irreverent (even "gross") provocative, and feature youthful messengers. Music is also an important element for them. For many of the older adults, messages also can be bold and visceral, however a number of them indicated that these should be balanced with softer messages. Young children and animals can serve as effective messengers for this older age group.

Both the younger and older respondents suggested that it is important to demonstrate cause-and-effect relationships in all social marketing efforts. They said that simply being told about the problem is insufficient. They also need to be told specifically what actions they need to take to correct the problem. At the same time, they emphasized that they do not want to be told too many things at one time. The best approach is to identify one or two problems related to nonpoint source pollution, and then provide the corrective actions. Also, both age segments felt strongly that EPA should invest considerable resources in educating young children about the problem. These youngsters, in turn, would educate their family and friends, and also provide frequent pollution prevention reminders to adults.

Key Findings – EPA Nonpoint Source Pollution Groups

Awareness of the Problem

Participants were unfamiliar with the term "nonpoint source pollution," and found it to be confusing and non-descriptive. Also, they indicated that the term made them feel that there was nothing they could do personally to address the problem (i.e., nonpoint = no point).

- *"It doesn't tell you anything."*
- *"It sounds like there's nothing you can do."*
- *"It sounds like a non-blaming term."*
- "Is it a code word for some government program?"
- *"You can't say where the pollution comes from."*

"Stormwater runoff" was a more familiar term and concept, although most respondents viewed themselves as having a passive role with respect to this problem (e.g., stormwater runoff is most obvious during a hard rainfall). They suggested that it might be more effective to use a term that carries the implication of "personal water pollution".

While some of the participants had heard the word "watershed", few knew the definition of a watershed or could name their watershed. Most did not see the importance of understanding this term in order to understand the problem of nonpoint source pollution.

Respondents could not recall a public awareness campaign highlighting the problem of nonpoint source pollution. A number surmised that perhaps nonpoint source pollution is a new, or rapidly growing problem that EPA now wants to address.

Many people were already taking personal actions that prevent nonpoint source pollution (e.g., proper disposal of oil, solvents, and chemicals, elimination of pesticides and fertilizers), but were unaware that these actions actually addressed this problem.

Many younger respondents indicated that they received little formal or informal education about conservation, pollution prevention, or other types of environmental stewardship. They added that the failure to emphasize these topics has resulted in them believing that modern technology must be adequate to address and correct any serious environmental issues.

- *"It's like it dropped off when the '80s came. They kind of got away from it."*
- *"There's a false sense of security. We don't hear about*

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it so we assume it's fine."

- *"It's de-emphasized to the point where most people aren't paying much attention to it."*
- *"Remember twenty years ago with recycling, Greenpeace, Earth Day? If lasted for a good five years, and then it trickled down. From the EPA standpoint, they can't count on that (infrequency)."*
- *"I definitely think it's slacked off. There's been no follow-through."*

In contrast, many of the older participants recalled both school coursework (e.g. ecology and conservation units) and public service announcements (Smokey the Bear, Woodsy Owl, and the Crying Indian) aimed at educating them about actions they could take to conserve the environment. The older respondents not only seemed more attuned to the multitude of environmental issues, but also were taking more voluntary personal actions to conserve resources and prevent pollution.

Respondents at some sites seemed far more aware and savvy about environmental issues than those at other sites. For example, both the younger and older Seattle respondents, while largely unaware of the term "nonpoint source pollution, mentioned a wide array of environmental concerns, and remarked that they believe people living in their area hear frequent messages about conservation and pollution prevention. Many of these messages, they said, relate to preserving the salmons' river habitat.

Concept Testing

Respondents generally agreed that a public awareness campaign targeting pollution prevention should include messages communicating both personal responsibility for the problem and personal actions that will ameliorate the problem. They remarked that messages describing this problem in more general terms (e.g., a community problem) would not convey that personal action is the desired outcome of the initiative.

- *"You've got to bring it to the personal level, because it is an individual action that causes this."*
- *"Touch us personally. Show us the result of what each person has done to our water system."*
- *"It tells me to dispose of chemicals properly, but doesn't lead me to action."*
- *"Tell me what I should do, and explain it to me. Instead of using fertilizer, use soil and compost."*
- *"Unless it happens to me it's still someone else's problem."*

At the same time, it's important that messages are not "too ambitious" and try to communicate too much information and too many requests.

- "Ads try to stick in twelve different things you can do. Why not just stick to one and tell us why we're supposed to do it. Don't just say 'don't so this.' Tell us what we're supposed to do."
- *"Too much information at once doesn't work. It needs to be a simple message, even if you're discussing a complex issue."*

Messages should clearly and dramatically demonstrate the immediate cause-and-effect relationship between personal polluting behaviors and resulting nonpoint source pollution.

- *"Something that would work would show how what we're doing effects a chain of events."*
- *"You've got to state the problem and have a solution. It's almost one-to-one."*
- *"If you see before and after results of what you're doing, it motivates you to do more."*

Messages aimed at educating a younger audience must include production elements that uniquely target their age group. They pay little attention to generic messages that appeal to children and older adults. They suggested that ads for them should be bold, hard-hitting, irreverent (even "gross") provocative, and feature youthful; messengers. Also, these messages do not have to be entirely believable (e.g., television PSA showing motor oil seeping from micro-

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UIC Program Completes Inspections -- The Underground Injection Control Program has completed its field inspection season. This year, floor drain inspections were targeted for businesses in the St. John River Watershed. 151 businesses were inspected, yielding 73 violations -- a 48% non-compliance rate, nearly double the noncompliance rate for the other watershed projects conducted to date. At this point, we attribute the higher noncompliance rate to limited areas with municipal sewer services and a lack of knowledge about proper waste water disposal by local code enforcement officers and municipal officials. Concurrent with inspections, information about floor drain management was sent to all municipal officials in the watershed. Also, the number of businesses with floor drains in the St. John River watershed was found to be greater than 90% surveyed, compared to just under 60% in the Presumpscot River/Casco Bay watershed. To date, 55 facilities are now in compliance and we continue to work with the remainder. Next year's field work: the Saco and Picataqua River Watersheds. FMI contact Tammy Gould at 287—7814 or tammy.gould@state.me.us

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waved frozen fishsticks; animals talking about the disgusting polluted water). Music is also an important element for them.

- *"You've got to have images that tie into young people, like the Taco Bell dog."*
- *"You need to make it cool to wash your car on the lawn, and bring your oil to the gas station."*
- *"I think you've got to play off something that's out there. Have Titanic hit a great big pile of trash, or oil cans."*
- *"Disgusting works; the grosser the better."*
- *"Britney Spears with a gas mask on."*
- *"Music gives you emotion."*
- *"Show a young star with blackened teeth holding a glass of dirty water."*
- *"The 'Mother Earth' thing doesn't work."*

Messages linking nonpoint source pollution to adverse health consequences seem to be both attention-getting, relevant and motivating, particularly to younger respondents. These participants seemed particularly concerned when told that drinking water (both from treatment plants and commercial bottlers) is not routinely tested for certain contaminants. Also, they expressed concern over the relationship between nonpoint source pollution and food contamination. Messages relating nonpoint source pollution to contamination of recreation areas are also relevant and highlight that even if water treatment plants make your water safe to drink, this technology does not make the lake or river in which you swim any cleaner.

- *"Contaminated rivers leads to diseased fish leads to heath problems."*
- "*People aren't interested unless something direct happens to them. Like if I drink the water, I'll get sick. If it doesn't happen to me, why would I be motivated?"*
- *"It kind of hits you because it's going into your body."*
- *"Something's not connecting at the end of all of these ads. There has to be an impact on health. If it has an effect on health, you'll react."*
- *"Bring it down to a health issue. A seal or two dying doesn't do it for me."*

Messages should challenge the common misconception that industry is the major contributor to river pollution. The respondents were generally surprised to learn that most river pollution is caused by the public, and offered that while people often view statistics with skepticism, a simple statement of fact can be persuasive.

- *"I always think that it's Exxon's or GE's fault. I don't think it's ever brought out in the media reports that it's us."*
- *"Until the big oil companies make sacrifices to develop new technologies, I don't see the population going toward saving the environment."*
- *"The big companies are the big contributors to the majority of environmental problems."*

Messages suggesting that a person should talk to a "polluting" neighbor elicited mixed reactions. For example, while most agreed they would talk to a close neighbor or friend whom they observed dumping oil or solvents down a stormdrain, they would be reluctant to approach a person they did not know well. Some added that in these times, the other person might interpret a low-key approach as confrontational, and could react in an unpredictable (e.g., aggressive or violent) manner.

It is important to develop a series of interrelated multimedia messages with a single "look and feel." For example, the respondents liked the recurring theme of the "Don't Waste Utah" campaign. They remarked it would be effective to use television and radio public service announcements to "brand nonpoint source pollution," and then use established and recognizable messages and images on billboards, collateral materials, and premium items.

Outreach Venues

Radio and television were mentioned as the more preferred venues for providing the public with information about nonpoint source pollution. Many respondents said they do not take the time to read flyers, brochures, newspaper and magazine articles. Some noted that billboards are probably the most effective type of print communication. They reacted unenthusiastically to using the Internet as an educational venue, noting that they tend to use electronic communication for e-mail and entertainment.

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Capacity Building Resources

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http://www.epa.gov/owow/nps/capacity/index.htm

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- *"Use TV; everything else is advertised on TV."*
- *"Buy air time. They claim that advertising on TV sticks."*
- *"We're all watching TV. We don't want to stop to read."*
- *"When we get home we sit down and watch TV."*
- *"Try radio advertising, both AM and FM. You need to do it repetitive in order to brand it."*
- *"Print is passé; it's sad but true."*
- *"The average person will not read in-depth, complex print with serious details."*
- *"I get mail like those pamphlets and sometimes will trash it before I read it."*

Talk and news radio was mentioned as the best type of radio programming for information about nonpoint source pollution. Also, radio stations could offer pollution prevention tips during the traffic and weather reports. Education offered via television could include stories on programs such as Dateline, 60 Minutes, and 20-20; video news releases during the nightly news, and creative public service announcements featuring local and national personalities.

Many of the respondents make an effort every night to watch the area weather report, and oftentimes have a favorite forecaster. They remarked that nonpoint source pollution prevention tips from the meteorologist as part of the weather forecast could have a very positive impact on both awareness and behavior change.

- *"Tips would be attention-getting."*
- *"Tack it onto the weather."*
- *"Everyone watches the weather."*

"Present it through the meteorologists in a regular way, then people would tend to look forward to it."

Both younger and older respondents emphasized the importance of EPA working with schools to develop and implement programs targeting young children with information about nonpoint source pollution. Such programs could explain the problem in simple and relevant terms, and describe the kinds of actions that kids and their family members can take to prevent this (and other) kinds of pollution. They said this would have a two-fold benefit. First, it would increase children's awareness of the importance of pollution prevention and conservation as important matters. Secondly, children would probably assume an active role as environmental educators by bringing home this new information and convincing their caregivers, siblings, friends, and other family members to take positive actions to prevent pollution.

- "You have to look at it over the long haul. Eventually every four year old will be a twenty year old."

- *"You're going to have an instant response with kids."*
- *"Trying to affect short-term change with people like us [age group] is going to be very tough."*
- *"Your target should be a 30-year target. Train the people who are most trainable right now – kids."*
- *"Teach the kids and it will spread, they have a lot of impact and if they notice that you're doing something you shouldn't (like dumping your car oil) they'll bring it up."*

New BMP Manual For Sites Less Than 5 Acres

The Metropolitan Council of the St. Paul - Minneapolis area plus several local cities and watershed districts have developed a new BMP manual for sites of less than 5 acres in cold climate environments. The manual includes guidelines for selecting BMPs, design guidelines for pollution prevention and stormwater runoff BMPs, stormwater model ordinances, list of project examples in the Twin Cities area, and an annotated bibliography. The manual can be used online (see link below) but is easier to use from a CD on your own system. Ordering information for CD version and paper version is also available on the website (this is a not for-profit-project - ordering price covers cost of copying CD or paper, plus shipping).

http://www.metrocouncil.org/environment/Watershed/bmp/manual.htm

From the Federal Register

Summary:

It has been announced in the federal register the "new TMDL rule" (drafted July 2000) will go into effect on April 30, 2003 and that the states will continue to operate under the existing 1985/amended in 1992 rule until that time. States are required to submit the next list of impaired waters by October 1, 2002 (extended from April 1, 2002). The new submittal date will provide States who wish to do so, the time to incorporate the recommendations suggested by EPA in the 2002 Integrated Water Quality Monitoring and Assessment Report guidance, which is currently undergoing a final review.

A copy of the Federal Register notice signed by the Administrator is posted on the TMDL web site at:
http://www.epa.gov/owow/tmdl/defer/isigned.html

Calendar of Events

January 24-25, 2002. Tools for Watershed Protection: A Workshop for Local Government: Intensive Training in Watershed Protection and Management sponsored by EPA's Office of Wetlands, Oceans, and Watersheds. The workshop is free and will take place at the Colonanade Hotel. FMI mail your registration form to Ellen Barros, Workshop Coordinator, c/o Horsley & Witten, Inc., 90 Route 6A, Sextant Hill, Sandwich, MA 02563, or FAX it to (508) 833-3150, attention Ellen.

February 25–March 1, 2002. 33rd Annual Conference & Expo: Adventures in Erosion Education. Hosted by International Erosion Control Association. FMI www.ieca.org

April 3, 2002. Stormwater Phase II Advisory Group meeting. FMI contact David Ladd at 287-5404 or david.ladd@state.me.us

April 17, 2002. Expo at UMF hosted by Franklin Co. SWCD. This Expo is designed for contractors, road crews, town officials, code enforcement officers, lake association members, camp owners, loggers, woodlot owners and the public. FMI 207-778-4279 and ask for Rosetta or Linda or write CCSWCD, 107 Park St. Farmington, ME 04938.

May 9, 2002. Maine Water Conference. Augusta Civic Center.

May 21-23, 2002. Annual New England NPS Conference. Spruce Point Inn, Booth Bay Harbor. Maine DEP is host. FMI contact Norm Marcotte 287-7727 or norm.g.marcotte@state.me.us

August 12-15, 2002. StormCon: The North American Surface Water Quality Conference & Exposition. Macro Island Marriott, Macro Island, FL. FMI www.StormCon.com, 805-681-1300 ext. 12 or sweditor@forester.net

Resources Available

Gravel Roads: Maintenance and Design Manual from EPA. Available at http://www.epa.gov/owow/nps/gravelman.pdf.

Web Sites of Interest

Center for Watershed Protection. www.CWP.org

EPA Stormwater phase II www.epa.gov/owm/sw/phase2

DEP stormwater site: www.state.me.us/dep/blwq/stormwtr/stadvgrp.htm

This newsletter is prepared especially of those involved in nonpoint source pollution issues. It is funded through an EPA 319 Clean Water Act Grant. If you have any announcements, comments or items for the Nonpoint Source Times, or if you would like to be added to the mailing list, please call or write:

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